Theory of Jet Engines (Cont.) 1111

AVAILABLE: Library of Congress

IS/fal
2-3-59

~~Card 11/11~~

86-58-6-15/34

AUTHOR: Konovalov, N. E., Engineer, Lt Col, Candidate of Technical Sciences

TITLE: Working Cycle and Efficiency of a Liquid-fuel Rocket Engine (Rabochiy protsess i koeffitsiyenty poleznogo deystviya ZhRD)

PERIODICAL: Vestnik Vozdushnogo flota Nr 6, 1958, pp 44-52 (USSR)

ABSTRACT: The author describes briefly a liquid-fuel rocket engine, discusses the design and operation of the combustion chamber, and presents a diagram showing the gas temperature variations along the combustion chamber (Fig.1). Two formulas $P=\frac{G}{g} C_c + F_c (p_c - p_H)$ and $P_{sp}=\frac{P}{G}$ $\frac{kg}{kg/sec}$ for the calculation of the thrust and the specific thrust respectively are also given. Describing the design and the operation of the exhaust nozzle, the author gives its schematic drawing (Fig. 2), a diagram showing the dependence of the coefficient φ_H on the angle of the nozzle's divergency (Fig. 3), and a schematic diagram showing the distribution of pressure in the nozzle (Fig. 4). Discussing the efficiency of a liquid fuel rocket, the author defines the inner efficiency (η_i), the thrust efficiency

$$\eta_p = \frac{2 \cdot \frac{co}{oc}}{1 + (\frac{co}{c_c})^2}.$$

Card 1/2

86-58-6-15/34

Working Cycle and Efficiency of (Cont.)

and the total efficiency $\eta_{\pi} = \frac{2.\frac{co}{cc}}{\frac{1}{\eta_i} + \left(\frac{co}{Cc}\right)^2}$. Figures 5,6, and 7 show the variation of $\frac{P}{-}$ the ratio of the thrust of a liquid-fuel rocket at a nonrated mode of operation to the thrust at the rated mode of operation, depending on the ratio of pressures P_H / P_C), the dependence of the inner efficiency on the rate of the expansion of gas in the nozzle, and the variation of the thrust efficiency and the variation of the total efficiency depending on the ratio of $\frac{c_o}{cc}$. There are two schematic drawings and 6 diagrams.

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Card 2/2

KONOVALOV, N.Ye., inzh.; SIBIRKO, A.N., inzh.

An efficient method of computing the volumes of the earth roadbed of railroads on an electronic digital computer. Transp. stroi. 12 no.1:38-39 Ja '62. (MIRA 17:2)

KONOVALOV, N.Ye., aspirant

Digital simulation of the land for solving the problem of route layou' by means [illegible] the electronic digital computer. Trudy MIIT no.181:72-78 '64. (MIRA 18:1)

KONOVALOV, N.Ye., inzh.

Gradient method of computing a cartogram for earthwork. Transp. stroi. 14 no.6:38-39 Je '64. (MIRA 18:2)

KONOVALOV, N.Ye., inzh.

Use of a numerical model of the area for the establishment of route parameters. Transp.stroi. 15 no.10:39-40 O '65.
(MIRA 18:12)

Konovalov, N.Ye., inzh.

One of the methods of assigning graphs to the memory of electronic computers. Transp. stroi. 15 no.6:39-40 Je '65. (MIRA 18:12)

14.7700 (1137, 1136, 1158)
18.8100

22958
S/126/61/011/005/003/015
E073/E535

AUTHORS: Palatnik, L.S., Konovalov, O.M., Gladkikh, N.T. and Kolesnikov, V. N.

TITLE: Investigation of the Three-Component Semiconductor Compound $PbBiSe_2$

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.11, No.5, pp.677-680

TEXT: In investigating Pb-Bi-Se alloys of variable composition the authors discovered that the $PbBiSe_2$ compound has semiconductor properties. The Pb-Bi-Se alloys were produced by simultaneous evaporation and condensation of the components onto a glass base in a vacuum chamber (about 5×10^{-5} mm Hg). The temperature of the glass base varied between 20 and 120°C. Thus, specimens of variable composition were produced which were in a highly non-equilibrium state and also in a state approaching the equilibrium one. The investigations included measuring the thermo e.m.f. and also X-ray phase analysis. It was found that for a content of 28-44% Pb and 24-32% Se a sharp rise takes place in the thermo e.m.f. (to 300 μV/deg). X-ray investigations showed for this range lines

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of a phase not hitherto known to exist in the investigated binary systems. The maximum thermo e.m.f. are obtained for alloys condensed onto a base at the temperatures 20 and 120°C. From the results it is concluded that the compound $PbBiSe_2$ forms and it was considered probable that this compound has semiconducting properties. Therefore, massive specimens of $PbBiSe_2$ compounds were investigated. These were produced from a charge corresponding to the stoichiometric composition except for the selenium where an additional quantity had to be added to ensure equilibrium pressure of the selenium vapours in the free volume of the ampoule at 1100°C. The charge was placed into a quartz ampoule which was evacuated and sealed after heating for two hours at 100°C. The thus produced compound was purified by zonal refining. The obtained $PbBiSe_2$ specimens had a tetragonal lattice with the parameters a = 5.26 Å, c = 3.84 Å. The temperature dependence of the electric resistance is plotted in Fig.3 (a - prior to zonal purification, during heating; b - same, during cooling; b - after zonal purification, during heating). Fig.4 shows the volt/ampere characteristic for a point contact (I,mA vs. U,V). Fig.5 shows the dependence

Investigation of the Three-Component.. S/126/61/011/005/003/015
E073/E535

of the thermo e.m.f., E,mV/°C, on the distance along the length of the ingot, mm (a - prior to zonal purification, b - after zonal purification). It can be seen that $PbBiSe_2$ is a semiconducting compound. The specimens produced by the authors had an n-type conductivity and a rectification coefficient of 1000 to 1500. It was found that $PbBiSe_2$ can be purified by zonal recrystallization; the structure of the compound did not change as a result of multiple zonal recrystallization. There are 5 figures, 1 table and 4 references: 3 Soviet and 1 English language reference: (Ref.3, Shockley, W. "Electrons and holes in semiconductors", Russian translation, 1955).

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet imeni A. M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 27, 1960

Card 3/4

KONOVALOV, Oleg Mikhaylovich; SKOROBOGATOV, B.S., kand. fiz.-matem. nauk, otv. red.; DEREVYANCHENKO, R.M., red.

[Semiconductor materials] Poluprovodnikovye materialy. Khar'kov, Izd-vo Khar'kovskogo univ., 1963. 212 p. (MIRA 17:5)

KONOVALOV, O.M.

Effect of solvents on the change in free energy of carboxylic acid molecules in solutions. Zhur. fiz. khim. 39 no.3:693-698 Mr '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov.

KONOVALOV, P., inzh.

Basic principles for the design of regulating installations.
Avt.dor. 28 no.10:18 O '65.
(MIRA 18:11)

SOV/123-59-16-64388

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 106 (USSR)

AUTHOR: Konovalov, P.A.

TITLE: Machine Tool for the Cutting of Tubes by Rolling

PERIODICAL: Byul. tekhn. ekon. inform. Sovnarkhoz Rostovsk. ekon. adm.r-na, 1958, Nr 4, 31

ABSTRACT: Instead of cutting tubes with a toothless saw by fusion, the Taganrog "Krasnyy Kotel'shchik" Plant has constructed and put into operation machines for the cutting of tubes of 20 - 60 mm in diameter and more, with a thickness of wall of 1.5 - 3 mm. The machines warrant a clean cut of the tubes without burr and fusing. The speed of the cutting disk is 200 rpm, diameter - 180 mm, power - 1.7 kw. 1 photo.

I.A.Ye.

Card 1/1

KONOVALOV, P.A.

Bridges with rigid reinforcement. Put' i put.khoz. no.1:19 Ja '59. (MIRA 12:2)

1. Starshiy insh. mostoispytatel'noy stantsii, g.Tashkent.
(Railroad bridges)

KONOVALOV, P.A., inzh.

Testing reinforced concrete bridges. Avt.dor. 22 no.6:7 Je '59. (MIRA 12:9)
(Bridges, Concrete--Testing)

YEFREMOV, M.G.; KONOVALOV, P.A.; MIKHEYEV, V.V.

Distribution of deformations in layers of a clay and sand bed being compacted; from field experiment material. Osn., fund. i mekh.grun. 5 no.6:5-7 '63. (MIRA 16:12)

KONOVALOV, P.A.; RUDNITSKI", N.Ya.

Coefficient of the variability of the modulus of soil deformation. Osn., fund. i mekh. grun. 6 no.3:16-17 '64 (MIRA 17:7)

KONOVALOV, P.A., inzh.

Testing of piles during the reconstruction of highway bridges.
Avt. dor. 22 no.10:10-11 O '59. (MIRA 13:2)
(Piling (Civil engineering)) (Bridges)

KONOVALOV, P.A.

Field study of the depth of the deformation of soil under load. Sbor. trud. NIIosn. no.54:14-25 '64.
(MIRA 17:10)

KLEPIKOV, S.N., kand.tekhn.nauk; KONOVALOV, P.D., inzh.

Stand for testing models of buildings on irregularly sagging foundation beds. Stroi.konstr. no.1:178-183 '65. (MIRA 19:1)

1. Nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy Gosstroya SSSR, Kiyev.

PHASE I BOOK EXPLOITATION SOV/5809

Konovalov, Petr Gordeyevich

Plasticheskiye massy, ikh svoystva i primeneniye v promyshlennosti; spravochnoye posobiye (Plastics, Their Properties and Application in Industry; Handbook) Moscow, Gosizdat "Vysshaya shkola," 1961. 180 p. 18,000 copies printed.

Ed.: D. N. Vaskevich; Ed. of Publishing House: Ye. I. Avramenko; Tech. Ed.: T. D. Garina.

PURPOSE : This book is intended for students in schools of higher learning and technical personnel in industries which use plastics.

COVERAGE: The following topics are discussed in the introduction and subsequent text: the chemistry and technology of polymerization and polymer production, plastics and auxiliary materials (fillers, plasticizers, etc.) used in manufacturing plastic goods, the properties of plastics, and their application in industry,

Card 1/2

Plastics, Their Properties and (Cont.) SOV/5809

including automobile manufacturing and shipbuilding. Plastics are classified according to their fields of application. Ch. I deals with general-purpose plastics; Chs. 2 and 3, with the application of medium- and high-strength plastics in machine building (antifriction and friction materials, toothed gears, etc.) and in electrical engineering, respectively. No personalities are mentioned. There are 23 references, all Soviet (including 1 translation).

TABLE OF CONTENTS [ABRIDGED]:

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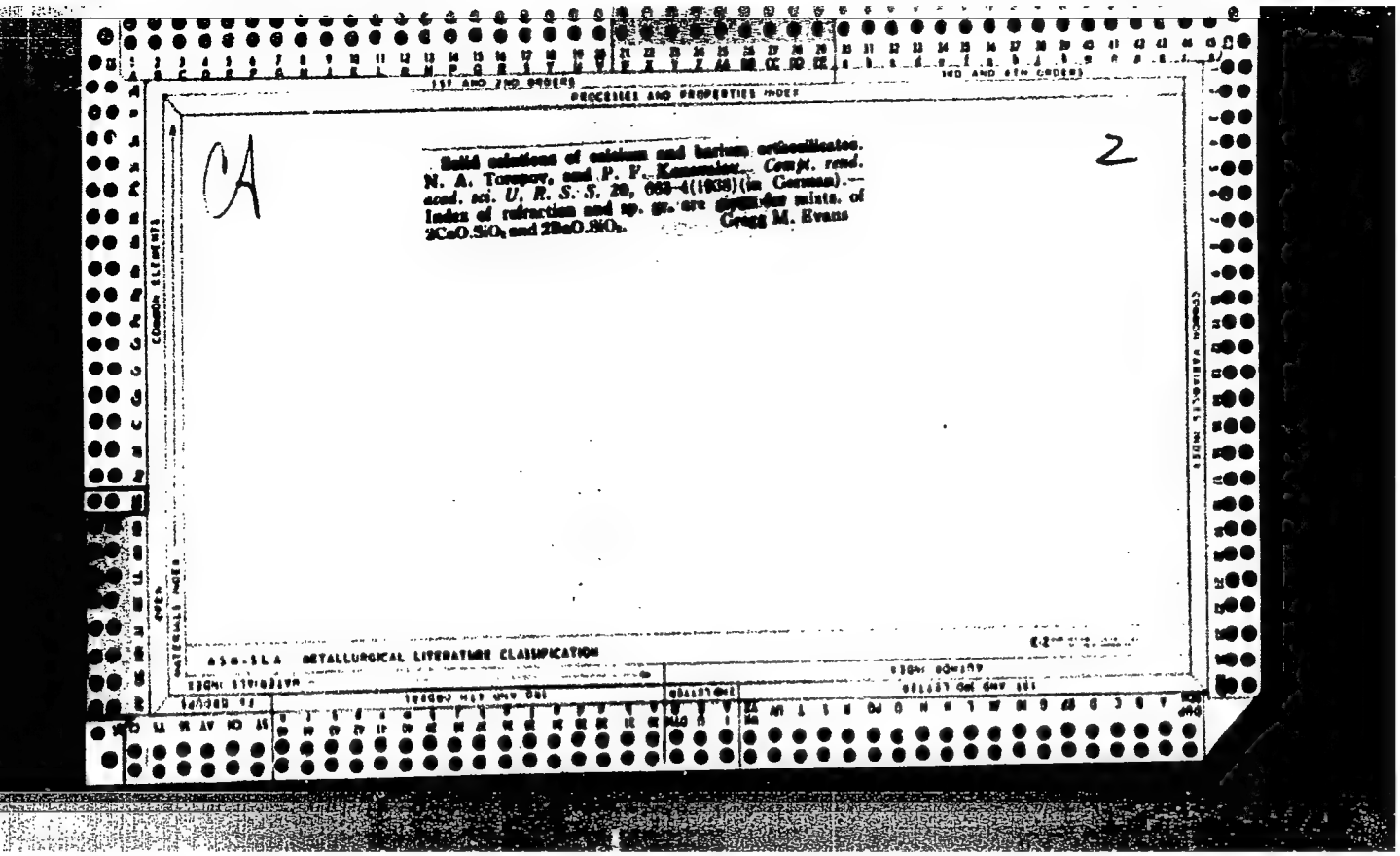
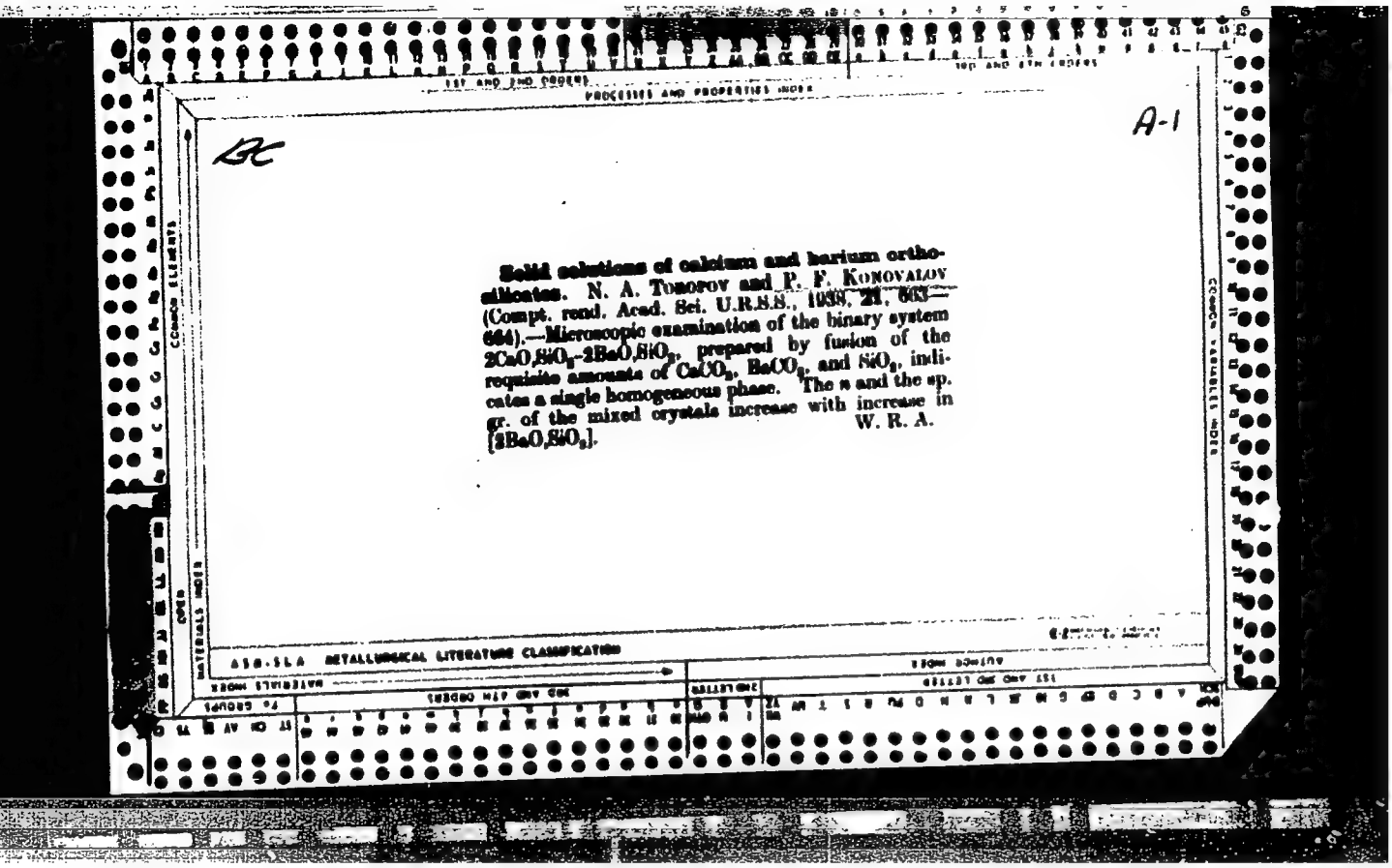
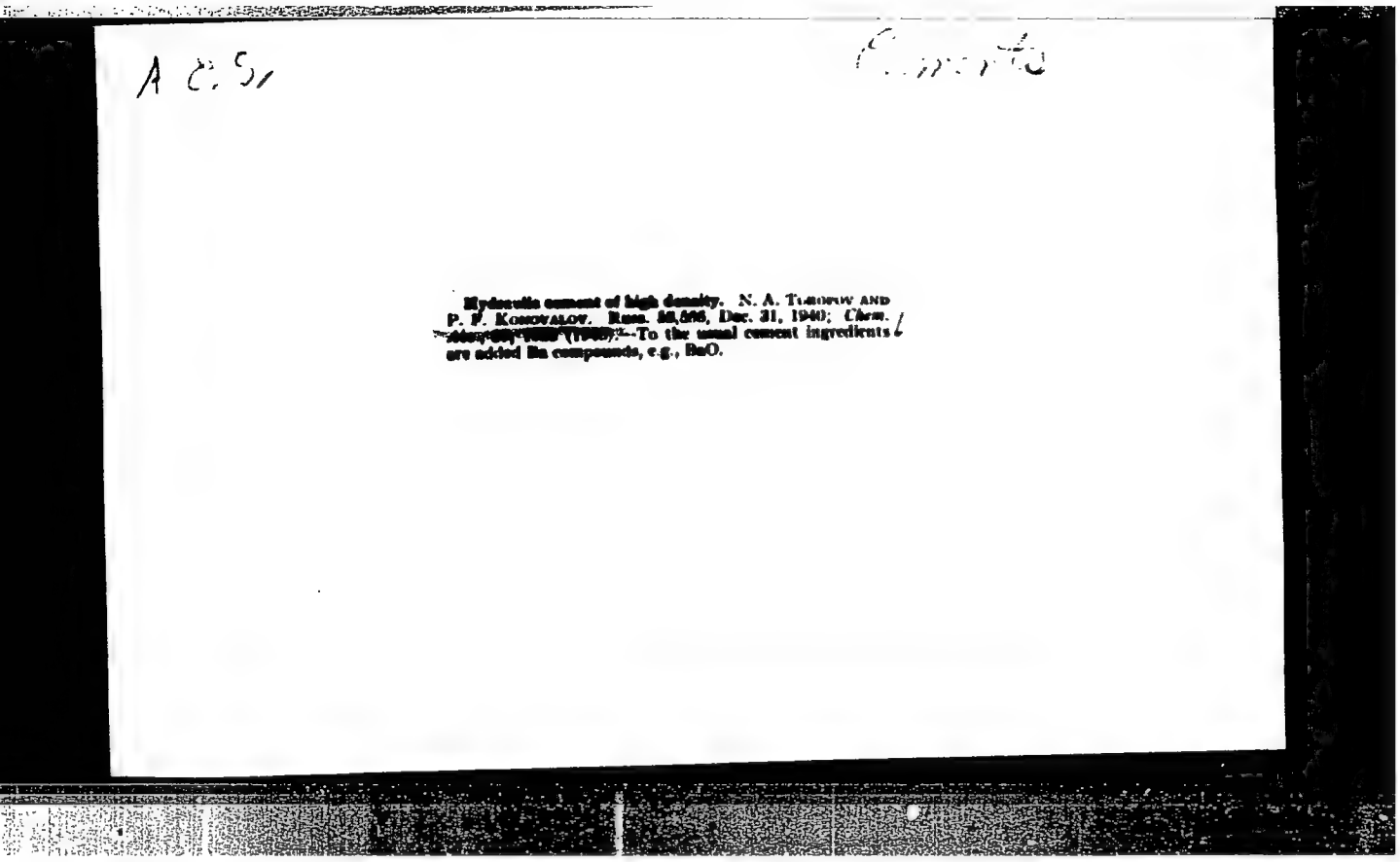


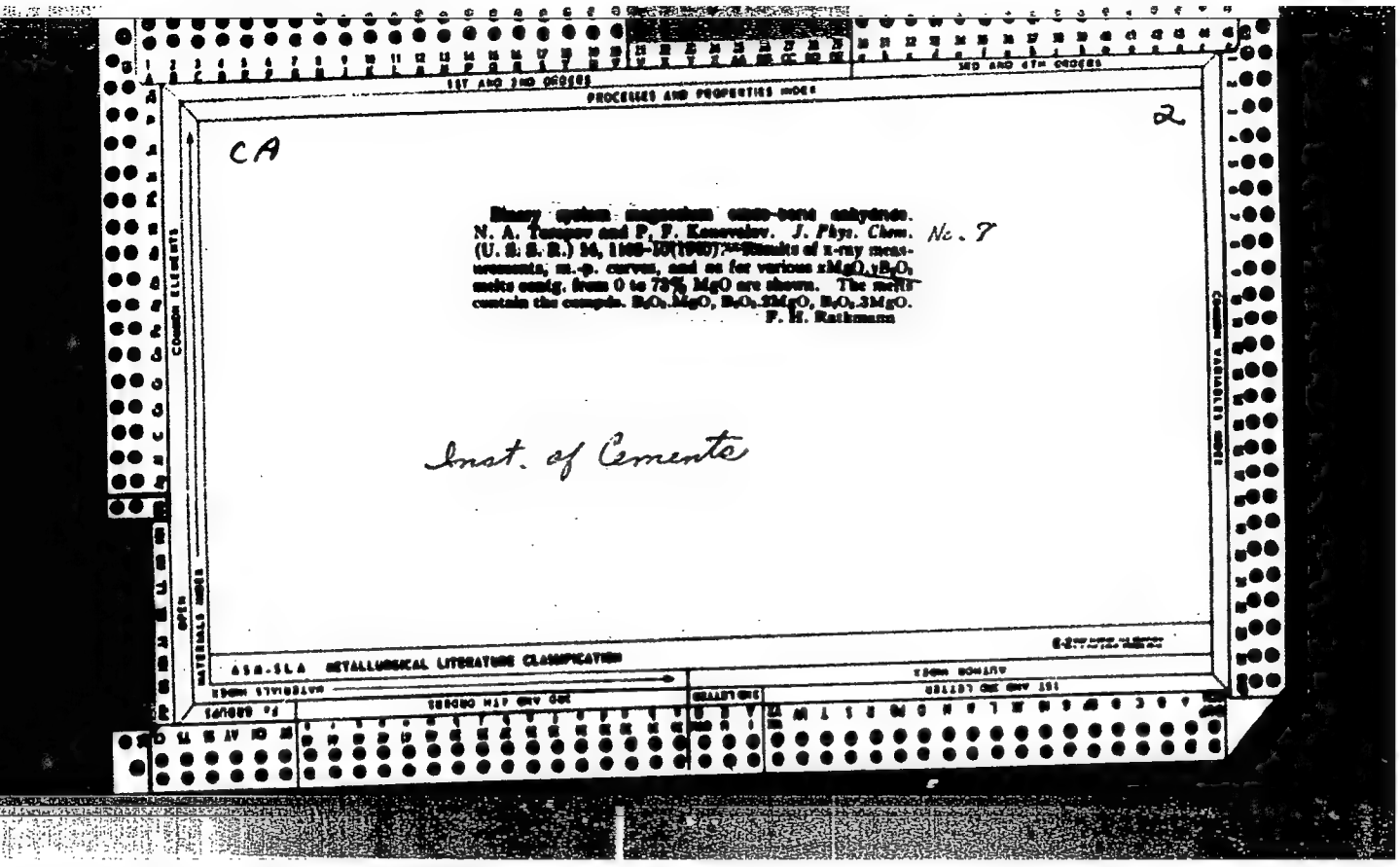


A-1

Solid solutions of calcium and barium orthosilicates. N. A. Tomorov and P. F. Konovalov (Compt. rend. Acad. Sci. U.R.S.S., 1938, **21**, 663—664).—Microscopic examination of the binary system $2CaO,SiO_2$-$2BaO,SiO_2$, prepared by fusion of the requisite amounts of $CaCO_3$, $BaCO_3$, and SiO_2, indicates a single homogeneous phase. The *n* and the sp. gr. of the mixed crystals increase with increase in $[2BaO,SiO_2]$. W. R. A.



Hydraulic cement of high density. N. A. TIMOFEW AND P. P. KONSTALOV. Russ. 55,586, Dec. 31, 1940; *Chem. Abstr.* [illegible] (1946).—To the usual cement ingredients are added Ba compounds, e.g., BaO.



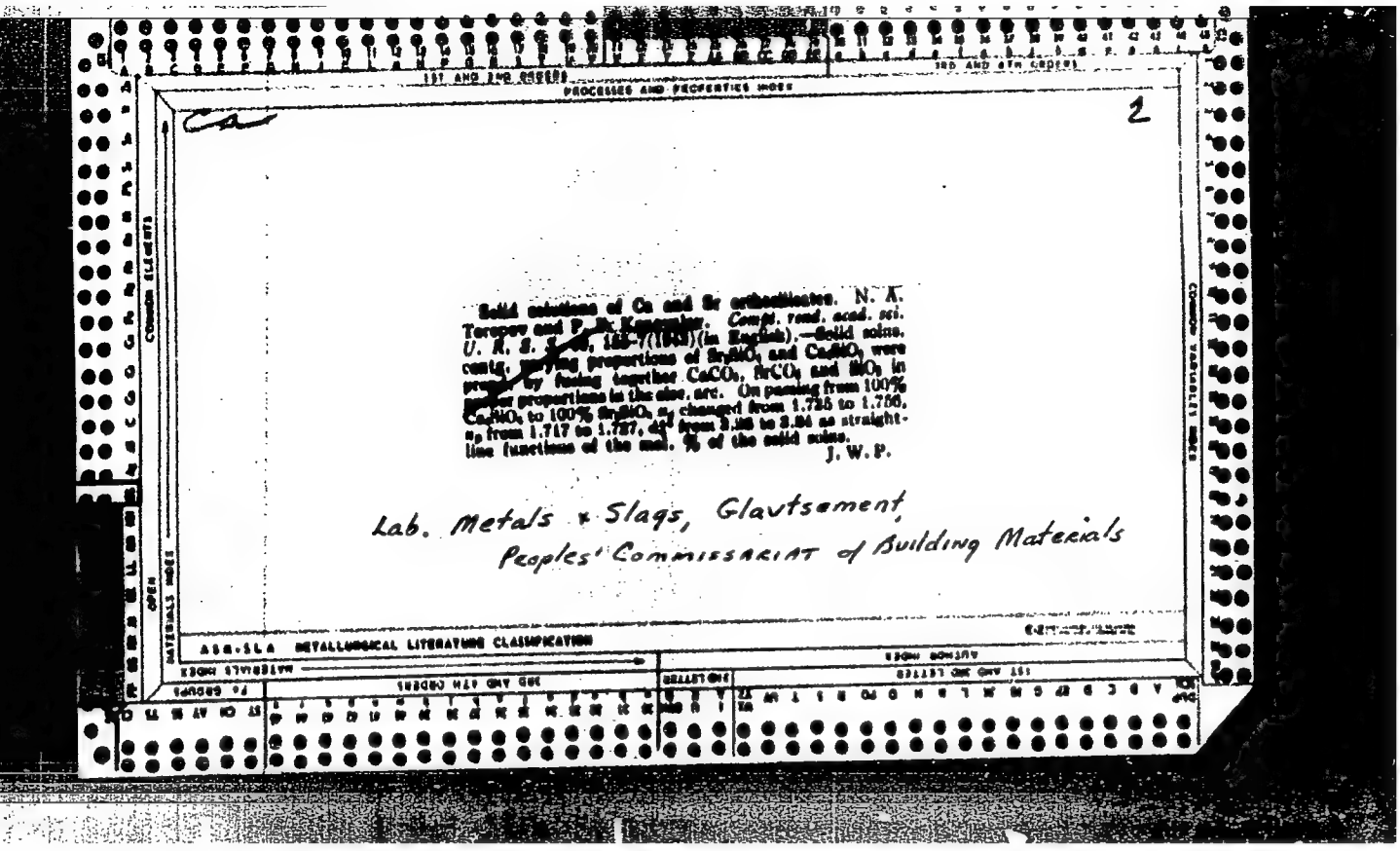
CA

2

Binary system magnesium oxide-boric anhydride. N. A. Toropov and P. P. Kosorukov. *J. Phys. Chem.* (U. S. S. R.) 14, 1108–10(1940).—Results of x-ray measurements, m.-p. curves, and an for various $xMgO.yB_2O_3$ melts contg. from 0 to 75% MgO are shown. The melts contain the compds. $B_2O_3.MgO$, $B_2O_3.2MgO$, $B_2O_3.3MgO$.
F. H. Rathmann

No. 7

Inst. of Cements



Solid solutions of Ca and Sr orthosilicates. N. A. Toropov and P. Ya. Kapustkin. *Compt. rend. acad. sci. U. R. S. S.* [illegible], 185-7(1943)(in English).—Solid solns. contg. varying proportions of Sr_2SiO_4 and Ca_2SiO_4 were prepd. by fusing together $CaCO_3$, $SrCO_3$ and SiO_2 in proper proportions in the elec. arc. On passing from 100% Ca_2SiO_4 to 100% Sr_2SiO_4, n_D changed from 1.735 to 1.700, n_D from 1.717 to 1.727, and [illegible] from 3.03 to 2.84 as straight-line functions of the mol. % of the solid solns.
J. W. P.

Lab. Metals + Slags, Glavtsement,
Peoples' Commissariat of Building Materials

KONOVALEV, P. F.

Intensification of clankering by addition of fluorspar into the raw mix. P. F. Konovalev and E. R. Skue. T sement 14, No. 5, 14-18(1948). --The effect on CaF_2 on clinkering was studied on slurries to which was added 0.08, 0.25, 0.5, 1.0, and 1.5% of CaF_2. Taking the theoretical hourly production as 100%, the relative outputs for the various CaF_2 contents were 99.3, 109, 112, 106, and 104%, resp. Prior to these expts. the av. output of the kilns was 92% of theoretical. During these expts. it was 101.3, 96, 94, 97.6, and 97%. The optimum quantity is 0.5% of the dry slurry components. The temp. in the fusion zone of the kiln dropped form 1440 to 1390°, and the temp. of the flue gases from 470 to 390°. Addn. of 0.5% of CaF_2 resulted in the formation of a stable coating on the refractory lining. At 0.3% of CaF_2 this coating disappeared and above 0.5% it crumbled and fell off. The compn. of the clinker also imporved. The contents of alite, belite, and relite in the different clinkers are given.

M.H.

CA

Zinc borates. N. A. Toropov and P. F. Konovalov. *Doklady Akad. Nauk S.S.R.* 66, 1103-6(1949); cf. *C.A.* 35, 3869.—The system ZnO–B_2O_3 was investigated by means of heating curves, and the solid phases were identified by x-ray diffraction studies. Three compds. were found: $3ZnO.B_2O_3$, m. 1125°; $ZnO.B_2O_3$, m. 1050°; $ZnO.3B_2O_3$, decompg. at 900° into $ZnO.B_2O_3$ and a liquid contg. 2% ZnO. The system is characterized by having a 2-liquid-phase region extending from 3 to 48% ZnO and with a lower limit of 990°. The upper limit was not detd. but was above 2000°. There are 3 eutectics: 990°, 48% ZnO; 1010°, 58% ZnO; 1080°, 82% ZnO. n_α and n_γ are, resp.: $ZnO.B_2O_3$, 1.643, 1.676; $3ZnO.B_2O_3$, 1.669, 1.730; $ZnO.3B_2O_3$, 2.004, 2.020. Arikd J. Miller

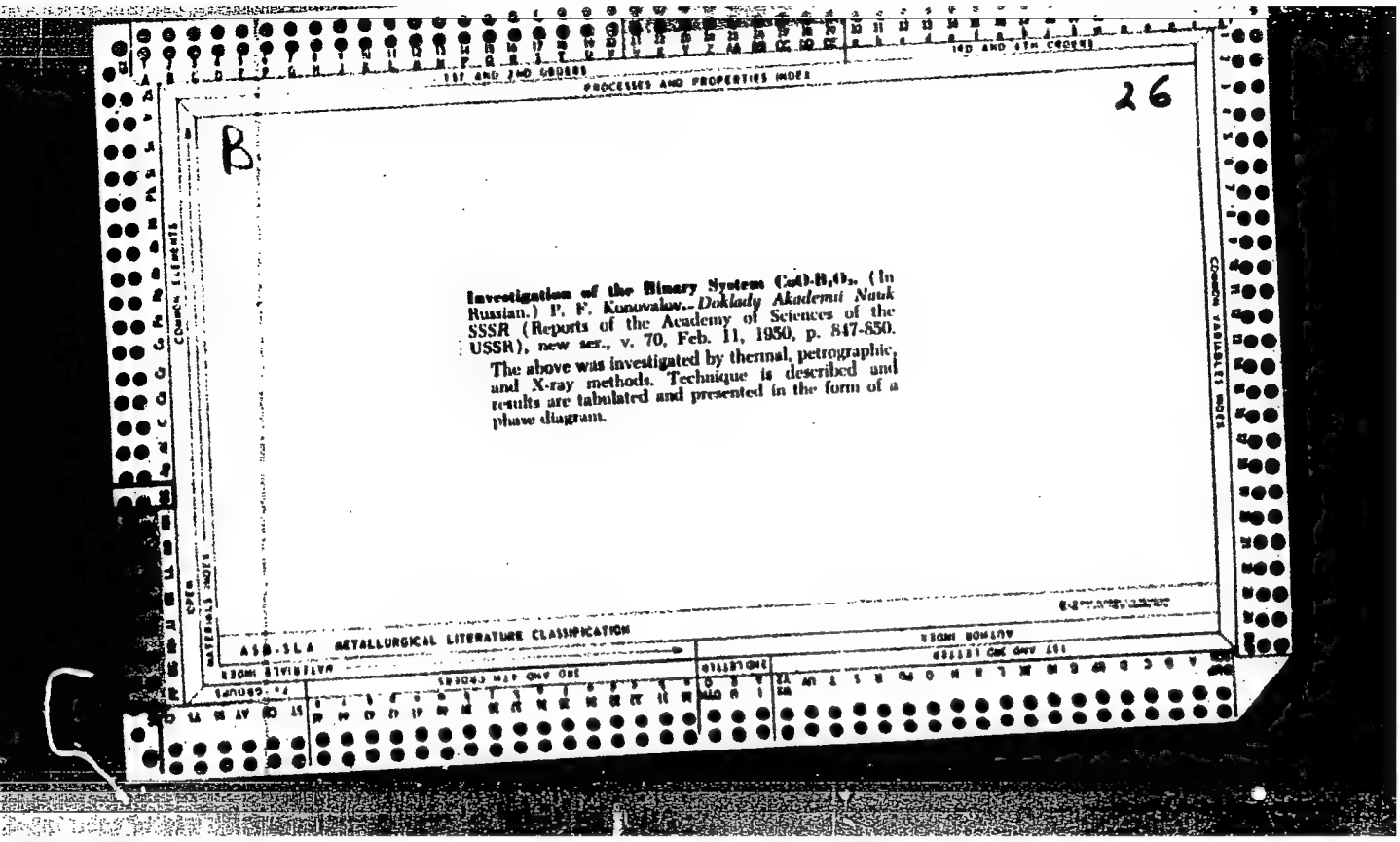
A-U Sci Res Inst. of Hydrocement.

A

2

Borates of magnesium and calcium. P. P. Kanovalov. *Doklady Akad. Nauk S.S.S.R.* 60, 1081–3(1948).—Only 2 compds., $MgO.B_2O_3$ and $MgO.3B_2O_3$, were detected by x-ray diffraction and by microscopic and thermographic examn. of samples obtained by fusion of B_2O_3 with 1–80% MgO. X-ray patterns prove that the exothermal effect at 780° does not correspond to a transition from the vitreous to the cryst. state. Samples of the compn. $MgO + 2B_2O_3$, heated at not higher than 780°, show, in microscopic examn., free B_2O_3, and an exothermal effect on further heating to 780°, whereas samples prepd. directly at 800° contain no free B_2O_3 and give no thermal effect at 780° except when first fused. Consequently, the exothermal effect at 780° corresponds to the reaction $MgO.B_2O_3 + 2B_2O_3 \rightarrow MgO.3B_2O_3$. The intermediate compd. $2MgO.3B_2O_3$, described as a naturally occurring mineral, is not detected in the system by any criterion. On heating to above 1030°, $MgO.3B_2O_3$ is decompd. into liquid and $MgO.B_2O_3$. In the system $CaO + B_2O_3$, the exothermal effect corresponding to the chem. reaction between free B_2O_3 and $CaO.B_2O_3$ is preceded by a broad level portion corresponding to cryst. of the glass, and immediately followed by fusion. The heat of the chem. reaction is very close to the heat of fusion. N. Thon

State All-Union Sci Res Planning Inst. of Cement Ind.



Investigation of the Binary System $CaO-B_2O_3$. (In Russian.) P. F. Kunuvalov.—*Doklady Akademii Nauk SSSR* (Reports of the Academy of Sciences of the USSR), new ser., v. 70, Feb. 11, 1950, p. 847-850.

The above was investigated by thermal, petrographic, and X-ray methods. Technique is described and results are tabulated and presented in the form of a phase diagram.

KONOVALOV, P. F.

Portland Cement

Use of artificial fluorine calcium in burning Portland cement clinker, TSement 18, No. 3, 1952

9. Monthly List of Russian Accessions, Library of Congress, October 1952 Unclassified.

KONOVALOV, P.F.

4803* Ionization X-Ray Analysis for the Investigation of Cements. Ionizatsionnyi rentgenovskii analiz dlia issledovaniia tsementov. (Russian) N. A. [illegible], P. F. Konovalov, A. I. Efremov, and G. V. [illegible]. June 1954. [illegible]
Equipment [illegible]
gram, [illegible]

KONOVALOV, P.F.

TOROPOV, N.A.; KONOVALOV, P.F.; YEFREMOV, A.I.; ANAN'YEVA, G.V.

Use of the high-temperature X-ray ionization method for studying processes that take place in alumina production. TSvet.met. 27 no.2:37-42 Mr-Ap '54. (MIRA 10:10)

1. Giprotsement.

(Alumina) (X rays)

LUR'YE, Yu.S., kandidat tekhnicheskikh nauk; KONOVALOV, P.F., kandidat tekhnicheskikh nauk; LEVIN, N.I., kandidat tekhnicheskikh nauk.

Two-way feeding of rotary kilns with raw material mixture. TSement 21 no.1:15-19 Ja '55. (MLRA 8:4)
(Cement kilns)

KONOVALOV, P.F.

USSR / Chemical Technology. Chemical Products and Their Application I-12

Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31638

Author : Konovalov P. F., Yefremov A. I.

Title : Use of Rapid Ionizational Roentgenostructural Analysis in the Studies of Cements

Orig Pub: Tr. Soveshchaniya po khimii tsementa. M., Promstroyizdat, 1956, 106-113

Abstract: Description of an accelerated ionizational roentgenographic method for the investigation of kinetics of formation of silicates under the influence of high temperatures. Results are given of studies of the transformations of kaolinite and alumina at different temperatures and different duration of heating.

Card 1/1

KONOVALOV, P.F., kandidat tekhnicheskikh nauk; MOROZOV, Ye. I., inzhener.

Studying the kinetics of cement hydration with the help of radioactive isotopes. TSement 22 no.5:4-6 S-O '56. (MLRA 10:1)
(Cement) (Hydration) (Radioisotopes--Industrial applications)

Hydration of CaO and $3CaO.Al_2O_3$ contg. Ca^{45}, was studied by measurements of radioactivity of dissolved $Ca(OH)_2$ in water. With both compds. a max. activity was reached after a few min., followed by a decline, which can be explained by an initial temporary supersatu. of water in respect to Ca ions.

Konovalov, P.F.

USSR/ Laboratory Equipment. Apparatuses, Their Theory, Construction and Application. I

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27324.

Author : P.F. Konovalov, A.I. Yefremov.

Title : Application of Fast Ionization X-Ray-Structural Analysis to Study of Crystalline Substances.

Orig Pub: Zavod. laboratoriya, 1956, 22, No. 7, 824 - 827.

Abstract: The installation with ionization recording (self-quenched counter tube) was constructed on the basis of the x-ray goniometer. The recording of ionization curves is carried out on oscillographic photographic paper 120 mm wide with a mirror galvanometer. Several ionization curves and the voltampere characteristic of the counter are shown.

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AUTHORS: Avgustinik, A.I., Kozlovskiy, L.V., Konovalov, P.F. 76-11-18/35

TITLE: On the Behavior of Muscovite When Heated (K voprosu ob otnoshenii muskovita k nagrevaniyu)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol.31, Nr 11, pp.2495-2500 (USSR)

ABSTRACT: Here Karelian muscovite with a comparatively high heat- and chemical resistance was investigated. Its chemical composition was as follows: SiO_2 - 44.80, TiO_2 - 0.25, Al_2O_3 - 35.54, Fe_2O_3 - 3.05, CaO - 0.32, MgO - 1.37, Na_2O - 1.58, K_2O - 8.82, losses by annealing - 4.70%. Individual rutile- and chlorite crystals were admixed. The following is shown: 1.) Separation of water in muscovite dehydration takes place in two stages: up to 400-450° 10 - 12%, and in the interval between 600 and 900° the most essential part is separated, which is constitutionally connected with the muscovite crystal lattice. 2.) Expansion of the sample, which is produced from finely ground muscovite, also takes place in two stages: a) at 400° (about 2% of the initial length), b) at 850-900° (about 1.7% of the initial length), which can be brought into connection with the separation of water in this stage. 3.) The action of a 6% hydrochloric acid solution upon the muscovite, which was annealed at different temperatures, proves the existence of an

Card 1/2

24(2,4) PHASE I BOOK EXPLOITATION SOV/3149

Konovalov, P. F., A. I. Yefremov, and B. V. Volkonskiy

Ionizatsionnaya rentgenostrukturnaya ustanovka dlya issledovaniya kristallicheskikh veshchestv pri razlichnykh temperaturakh (Ionization X-ray Apparatus for Study of Crystalline Substances at Various Temperatures) Leningrad, 1958. 133 p. Errata slip inserted. 1,000 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo promyshlennosti stroitel'nykh materialov, Leningradskoye oblastnoye pravleniye.

Ed. (Title page): N. A. Toropov, Member of the Academy of Building and Architecture, USSR, Professor, Doctor of Technical Sciences; Ed. (Inside book): V. I. Sadkov.

PURPOSE: This book is intended for physicists and engineers in industry, civil engineers, physical metallurgists, researchers in scientific research institutes and persons affiliated with higher educational institutions who are interested in the construction, application and operation of ionization x-ray units

Card 1/7

Ionization X-ray Apparatus (Cont.) SOV/3149

for studying the composition and structure of building materials, metals and other substances.

COVERAGE: The book gives a detailed description of the development and operation of an ionization x-ray unit by members of the laboratory for physical chemistry and petrography at Giprotsement and present some practical methods for its utilization. The second part of the book reviews a number of investigations which demonstrate the superiority of this method in the analysis of polycrystalline substances and building materials, and in studies of polymorphic transformation processes, clinker formation, and the hydration processes of cements, clinker metals and other materials. Many of the figures are reproductions of ionization roentgenograms of hydration and dehydration products of metallic salts. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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15(6) SOV/101-59-2-7/13

AUTHORS: Konovalov, P.F. and Morozov, Ye.I.

TITLE: The Composition of Products Resulting From the Hydration of Aluminates in a Solution of $CaCl_2$

PERIODICAL: Tsement, 1959, Nr 2, 25-27 (USSR)

ABSTRACT: The authors state that the solidification of cement is the result of various chemical reactions. Simultaneously occurring hydration, hydrolysis, compounding process and others, in their assembly, complicate the survey of the hardening process. The hydrochloric aluminates, resulting from the reaction of the tricalcium aluminate with a solution of $CaCl_2$, have been studied by many investigators. The composition of the cement clinker may contain aluminates of subbasic properties, such as $12CaO \cdot 7Al_2O_3$, $CaO \cdot Al_2O_3$, $CaO \cdot 2Al_2O_3$, producing combined complexes with calcium chloride. Tricalcium aluminate, in a combination with calcium chloride produces the compound

Card 1/3

The Composition of Products Resulting From the Hydration of Aluminates in a Solution of $CaCl_2$

$3CaO \cdot Al_2O_3 \cdot nCaCl_2 \cdot qH_2O$; in the hard state the hydrolysis products are absent. This fact simplifies finding of the detailed composition of the complex. For identification purposes, the method of radioactive indicators has been applied (Tsement, Nr 3, 1958, p 24), permitting to determine the composition of new compounds. Another method is the X-ray structural analysis. Aluminum hydrooxide, resulting from the hydrolysis of aluminates occurring in a highly dispersive state, does not disturb the structural image of new compounds. An X-ray generator, built by the Giprotsement (State Institute for the Design and Planning of Establishments for Scientific Research in the Cement Industry) was used for this purpose, with a type BSV X-ray tube and an Ni filter; the tube was placed horizontally. The characteristic of the tube was: power (u) 28 kW, current 20 milliamperes. The voltage of the

The Composition of Products Resulting From the Hydration of Aluminates in a Solution of $CaCl_2$

incandescence was stabilized by a ferro-resonance stabilizer. The voltage shown on the meter was up to 1300 v from the BAS-80 type batteries. The sample of the mineral to be examined was mixed with a 10% solution of $CaCl_2$. In order to prevent setting, the mixture was shaken several times. Prior to the X-raying, the suspension was filtered through a glass type Nr 4 filter. The deposited residue was rinsed with ethyl alcohol and dried at 20° C. Then, the radiograph was made. The water binding content for all aluminates was 100:1. The authors conclude that calcium aluminates having various bases produce a complex compound of identical composition in $CaCl_2$. There are 3 sets of graphs and 1 Soviet reference.

5.5320

75694
SOV/80-32-10-43/51

AUTHORS: Petrova, V. Z., Avgustinik, A. I., Konovalov, P. F., Konovalova, Ye. P.

TITLE: Brief Communications. Concerning Dissolution of Quartz in Feldspar Melts

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2351-2354 (USSR)

ABSTRACT: The vitreous phase of porcelain was studied in order to determine the effect of the quartz dissolved in it on the mechanical properties of porcelain. The samples were prepared by semi-dry pressing under 1,000 kg/cm^2 at 7-8% moisture. The samples were disks of diameter 20 mm, thickness 3 mm. A mixture of potassium feldspar and pulverized quartz was used. The samples were kilned at 1,200, 1,280 and 1,350° with different holding time (1, 2.5, 5 and 9 hr). The samples were investigated by: X-ray quantitative analysis, using pulverized samples, with chemically pure calcium fluoride as an internal

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standard; microhardness determination, using MPT-3 apparatus; and microscopic investigation, using MIM-8 metallographic microscope. It was shown that quartz content in feldspar melt (referring to porcelain) can be determined by X-ray analysis without the use of an internal standard or by microscopic investigations of the polished sections, which were first etched with a mixture of 9 parts of 14% H_2SiF_6 and 3 parts of 30% HF, and then polished. The microhardness of feldspar melt with dissolved quartz in it is shown in Fig. 3. It was shown that the solubility of quartz in feldspar melt is in direct proportion to the kilning temperature; this explains the maximum microhardness of porcelain at 1,280° and 9 hr holding (see Fig. 3), since at the lower temperature (1,200°) a large quantity of quartz remains undissolved and at a higher temperature (1,350°) nearly all the quartz is dissolved. The percentage of quartz dissolved in feldspar melt affects the mechanical properties of porcelain. There are 3 tables; 4 figures;

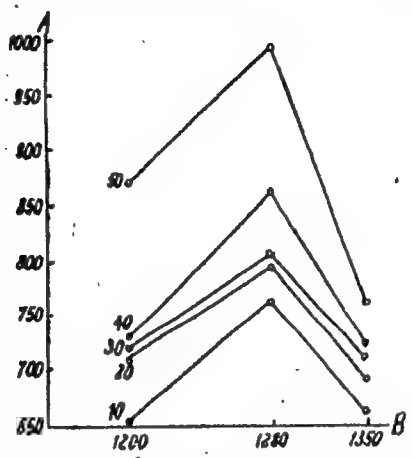


Fig. 3. Effect of kilning temperature on the microhardness, holding for 9 hr. (A) microhardness (in kg/cm^2); (B) temperature of kilning (in ^{o}C). The figures on the curves show the content of SiO_2 in the samples (in %).

Brief Communications. Concerning Dissolution of Quartz in Feldspar Melts

75694
SOV/80-32-10-43/51

and 9 references, 4 German, 2 Soviet, 1 Japanese, 2 U.S. The U.S. references are: Matisovsky, L., J. Am. Cer. Soc., 40, 9, 299 (1957); Sobe, S. C., Cook, R. Z., J. Am. Cer. Soc., 34, 5, 145 (1951).

SUBMITTED: June 3, 1959

Card 4/4

LUR'YE, Yu.S.; KONOVALOV, P.F.

Using vacuum techniques in kilning portland cement mixes. (MIRA 13:5)
TSement 26 no.1:10-14 Ja-F '60.
(Portland cement) (Vacuum apparatus)

S/081/61/000/019/044/085
B110/B101

AUTHORS: Konovalov, P. F., Morozov, Ye. I.

TITLE: Penetration of calcium and iron in periclase-spinel refractory material

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 302, abstract 19K198 (Nauchn. soobshch. Gos. Vses. n.-i. in-t tsementn. prom-sti, no. 10 (41), 1961, 30 - 33)

TEXT: The diffusion coefficients of Ca^{45} and Fe^{59} at 1000 - 1400°C were studied. Basing on the data obtained the authors compiled tables which they used for the construction of curves and the calculation of diffusion parameters. In both cases two types of migration of the material through the substance were distinguished, i. e., surface and volume penetration. At low temperatures the diffusion coefficients and activation energies of the two ions become identical. With rising temperature the difference between the diffusion coefficients and activation energies of different diffusing ions increases. This proves that the chemical properties of the diffusing substances in the case of surface diffusion are of smaller

Card 1/2

KONOVALOV, P.F.; MOROZOV, Ye.I.

Reaction of aluminates with calcium sulfate and calcium chloride. Zhur.prikl.khim. 34 no.3:675-676 Mr '61. (MIRA 14:5)

1. Leningradskiy institut "Giprotsement." (Calcium sulfate) (Calcium chloride) (Aluminates)

KONOVALOV, P.F.; VOLKONSKIY, B.V.; KHASHKOVSKAYA, A.P.; TOROPOV, N.A., red.; ROTENBERG, A.S., red.; ROZOV, L.K., tekhn. red.

[Atlas of the microstructures of cement clinkers, refractories, and slags]Atlas mikrostruktur tsementnykh klinkerov, ogneupovov i shlakov. Pod red. N.A.Toropova. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1962. 204 p. (MIRA 15:11)

1.Chlen-korrespondent Akademii nauk SSSR deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Toropov).
(Cement clinkers) (Refractory materials) (Slag)

VOLKONSKIY, Boris Vasil'yevich; KONOVALOV, Pet. Fedorovich; MAKASHEV, Sergey Dmitriyevich; TOROPOV, N.A., doktor tekhn. nauk, prof., red.; MAKASHEV, S.D., nauchn. red.

[Mineralizers in the cement industry] Mineralizatory v tsementnoi promyshlennosti. Moskva, Stroiizdat, 1964. 197 p. (MIRA 17:4)

1. Chlen-korrespondent AN SSSR (for Toropov).

KONOVALOV, P.F.

Reflex effects of cardiovascular drugs from venous receptors in frogs [with summary in English]. Biul.eksp.biol. i med. 45 no.2:77-80 F'58. (MIRA 11:5)

1. Iz kafedry fiziologii (zav. - prof. G.N. Sorokhtin) Khabarovskogo meditsinskogo instituta.
(VEINS, effect of drugs on,
drugs influencing cardiovasc. funct.,resp. & cardiac reactions (Rus))
(RESPIRATION, physiology,
eff. of venous stimulation with various drugs influencing cardiovasc. funct. (Rus))
(HEART, physiology,
same)

KONOVALOV, P. F. Cand Med Sci -- (diss) "Reflex effect of certain ~~medicinal~~ drugs ~~substances~~ from vein receptors." Khabarovsk, 1959. 24 pp (Khabarovsk State Med Inst), 220 copies (KL, 52-59, 125)

KONOVALOV, P.F.

Reflex effect of certain drugs from receptors of the mesenteric vein in the cat. Biul.eksp.biol.i med. 48 no.12:71-74 D '59.
(MIRA 13:5)

1. Iz kafedry fiziologii (zav. - prof. G.N. Sorokhtin) Khabarovskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.
(MESENTERIC VESSELS pharmacol.)
(BLOOD PRESSURE pharmacol.)
(RESPIRATION pharmacol.)

KONOVALOV, P.F.

Method of electrostimulation of the vascular receptors. Biul.eksp. biol. i med. 51 no.1:115-116 Ja '61. (MIRA 14:5)

1. Iz kafedry fiziologii (zav. - prof. G.N.Sorokhtin) Khabarovskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.
(BLOOD VESSELS--INNERVATION) (RECEPTORS (NEUROLOGY))

KONOVALOV, P.F.

Reflex influence of potassium chloride and calcium chloride from vein receptors. Trudy Khab. med. inst. 23 no.2:53-54 '62 (MIRA 16:12)

Effect of potassium and calcium on the activity of vein receptors. Ibid.:55-56

1. Iz kafedry fiziologii (zav. - prof. G.N.Sorokhtin) Khabarovskogo meditsinskogo instituta.

S/891/62/000/000/003/006
A057/A126

AUTHORS: Konovalov, P.F., Kiseleva, T.P.

TITLE: Physico-chemical processes occurring in the raw cement mixture under high-temperature conditions

SOURCE: Novoye v khimii i tekhnologii tsementa; trudy soveshchaniya po khimii i tekhnologii tsementa, 1961 g. Ed. by P.P. Budnikov and others, Moscow, Gosstroyizdat, 1962, 67 - 73

TEXT: The authors are developing at present a method for the preparation of clinkers by accelerated high-temperature calcination. In present paper results are given of laboratory experiments (with microphotographs) on processes occurring in the raw-cement mixture in dependence of temperature and holding time for a mixture with a high lime saturation degree, and also some results upon accelerated high-temperature calcination obtained in a pilot plant. The results presented demonstrate that highly resistant clinkers with high alite content can be prepared from a raw mixture with a high KN value and increased silicate modulus at calcination temperatures of about 2,000°C in a much shorter time and with less energy consumption than by the common method. The laboratory ex-

ACCESSION NR: AP4032819 S/0219/64/000/004/0138/0139

AUTHOR: Konovalov, P. F.

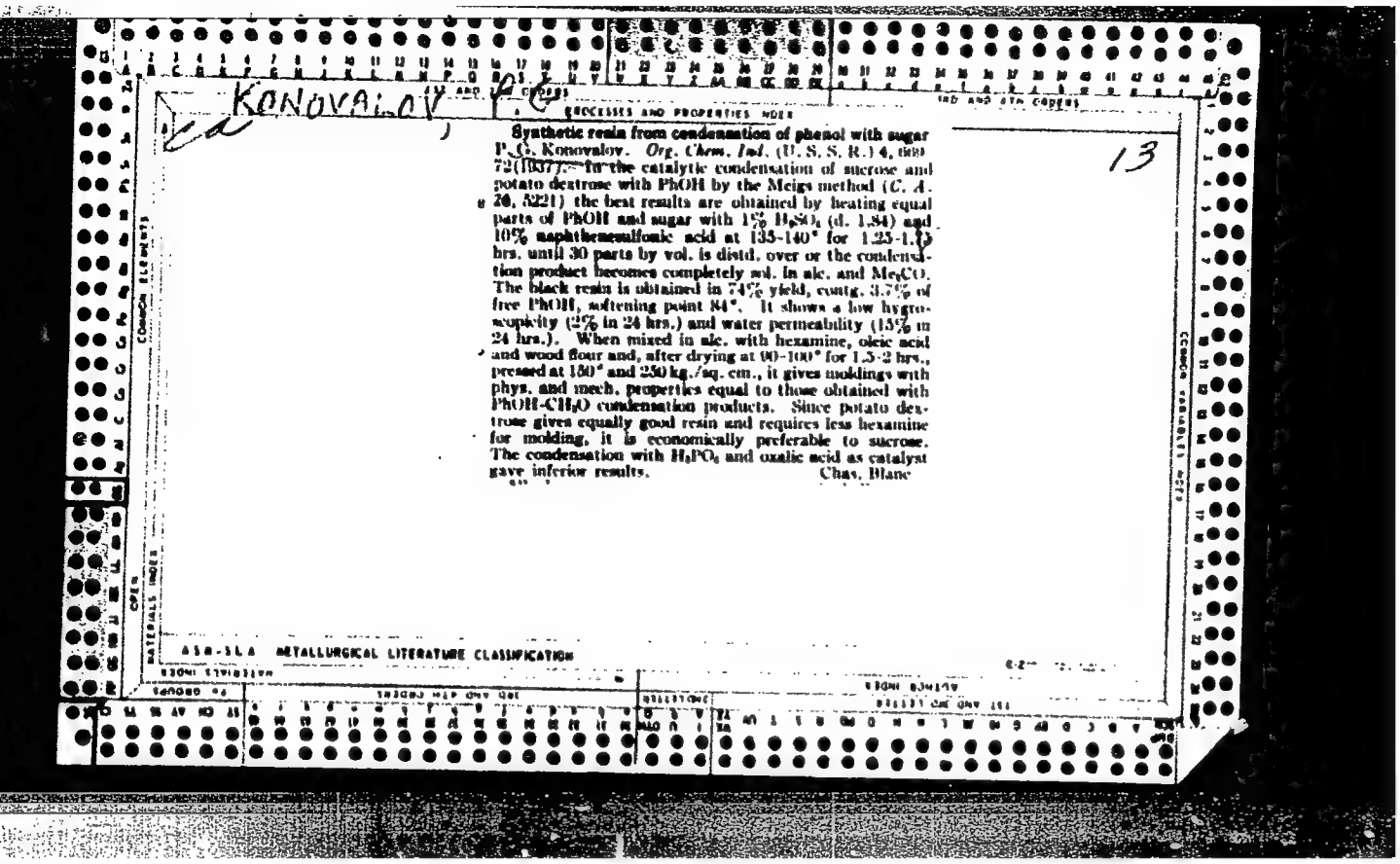
TITLE: Suction chamber (PK-2) for recording nerve biocurrents

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny*, no. 4, 1964, 138-139

TOPIC TAGS: suction chamber, nerve biocurrent, nerve biocurrent lead, free movement, moist chamber

ABSTRACT: The PK-2 suction chamber protects the nerve from drying and prevents change in the nerve position on the electrode during free movement of the animal. The chamber is made of plexiglas and is 6 mm high with an outer diameter of 16 mm and an inner diameter of 12 mm. The chamber opens at the bottom, has a silver electrode inside near the top, and a rubber suction ball connected to the inside through its side wall. After the nerve is prepared, the chamber opening is placed over the surrounding tissues, suction is applied, a hermetical seal is produced, and the nerve is pressed firmly against the electrode. The upper part of the chamber is

Card 1/2



KONOVALOV, P. G.

PROCESSES AND PROPERTIES INDEX

13

Synthetic resin from condensation of phenol with sugar P. G. Konovalov. *Org. Chem. Ind.* (U. S. S. R.) 4, 69-72(1937).—In the catalytic condensation of sucrose and potato dextrose with PhOH by the Meigs method (*C. A.* 20, 5221) the best results are obtained by heating equal parts of PhOH and sugar with 1% H_2SO_4 (d. 1.84) and 10% naphthenesulfonic acid at 135-140° for 1.25-1.75 hrs. until 30 parts by vol. is distd. over or the condensation product becomes completely sol. in alc. and Me_2CO. The black resin is obtained in 74% yield, contg. 3.7% of free PhOH, softening point 84°. It shows a low hygroscopicity (2% in 24 hrs.) and water permeability (15% in 24 hrs.). When mixed in alc. with hexamine, oleic acid and wood flour and, after drying at 90-100° for 1.5-2 hrs., pressed at 150° and 250 kg./sq. cm., it gives moldings with phys. and mech. properties equal to those obtained with PhOH-CH_2O condensation products. Since potato dextrose gives equally good resin and requires less hexamine for molding, it is economically preferable to sucrose. The condensation with H_3PO_4 and oxalic acid as catalyst gave inferior results. Chas. Blanc

A58-3L4 METALLURGICAL LITERATURE CLASSIFICATION

KONOVALOV, P. G.; ALEKSEYEV, YE. G.; GOROVOI, B. YA.

Medical Instruments and Apparatus

Ways of improving the quality of painting medical equipment. Med. prom., no. 4, 1952

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

KONOVALOV, P. G.

"Investigation of the Properties of Polymers of Divinylacetylene and of Chemical Plastics on Their Base as a Protective Lining Material for Chemical Equipment." Sub 10 Jan 52, Moscow Inst of Chemical Machine Building.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

RODE, V.V.; RAFIKOV, S.R.; YERGEBEKOV, M.Ye.; VASKEVICH, D.N.; KONOVALOV, P.G.; D'YACHKOV, G.A.

Thermal degradation of polyalkylenephosphinic acids and their salts. Vysokom. soed. 7 no.8:1452-1455 Ag '65. (MIRA 18:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

TRET'YAKOV, A.V., kand.tekhn.nauk; GRACHEV, A.V., inzh.; TOKMAKOV, A.A., inzh.; OVODENKO, M.B., inzh.; KONOVALOV, P.G., inzh.

Redesigning the cooling system of the 2800 mill. Sbor. st. NIITIAZHMASHa Uralmashzavoda no.6:156-160 '65. (MIRA 18:11)

RODE, V.V.; RAFIKOV, S.R.; YERGEBEKOV, M.Ye.; D'YACHKOV, G.A.; VASKEVICH, D.N.; KONOVALOV, P.G.

Thermal and oxidative degradation of polyalkylenephosphinic acids and their salts. Vysokom. soed. 7 no.5:928-932 My '65. (MIRA 18:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 61725-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5013064 UR/0190/65/007/005/0928/0932
678.01:54+678.86

AUTHORS: Rode, V. V.; Rafikov, S. R.; Yergebekov, M. Ye.; D'yachkov, G. A.; Vaskeyich, D. N.; Konovalov, P. G.

TITLE: Thermooxidative degradation of polyalkylenephosphinic acids and their salts. 22nd communication in the series "Chemical transformations in polymers"

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 5, 1965, 928-932

TOPIC TAGS: polymer, thermal degradation, oxidation, polyalkylphosphinic acid, polyethylene

ABSTRACT: The work was undertaken to extend the investigations of polyalkylenephosphinic acids of different phosphorus content (A) and their salts (B), reported by S. R. Rafikov and M. Ye. Yergebekov (Dokl. AN SSSR, 160, 1331, 1965), and, in particular, to determine the thermal stability of these compounds at elevated temperatures. The thermooxidative degradation of the following compounds has been investigated: polyalkylphosphinic acids containing 1.7, 6.5, and 14% P and the Na, Ba, and Pb salts of 14% P acid. The results were compared with thermal degradation data for pure polyethylene. Thermooxidative degradations were carried out in air in

Card 1/2

L 1859-66 EWT(m)/EPF(c)/T/EWA(h)/EWA(1) DS/RM

ACCESSION NR: AP5022614 UR/0190/65/007/009/1637/1640
678.01:54+678.744

AUTHOR: Belyakova, A. P.; Bokov, Yu. S.; Lavrishchev, V. P.; Konovalov, P. G.; Vaskevich, D. N.

TITLE: Photosensitivity of poly(vinyl cinnamate) and its nitro-derivatives

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1637-1640

TOPIC TAGS: polymer, photosensitivity, polyvinylcinnamate, photosensitive polymer

ABSTRACT: The purpose of this work was to clarify the effect of substituents in the monomer molecule on the photosensitivity of the polymer. Poly(vinyl cinnamate) and the o, m, and p-nitroderivatives were prepared by heating poly(vinyl alcohol) (mol. wt. 12,000, 0.72% acetate groups) in pyridine for 4 hours at 50C with cinnamyl chloride, or the appropriate nitrocinnamyl chloride. Polymer films, 100 ± 10 μ thick, were irradiated with ultraviolet light and their thermomechanical properties, solubilities, ultraviolet and infrared spectra were measured and compared to those of untreated films. It was found that the photosensitivity of the compounds in-

Card 1/2

KONOVALOV, P.G.

USSR

Arresting autoxidation in acetylene polymers. P. G. Konovalov. *Sbornik Statei Voprosam Zashchity Polimer. Mat.* 1953, No. 4, 35-43; *Referat. Zhur., Khim.* 1954, No. 33103.—Addn. of perchlorovinyl, polystyrene, and aniline-HCHO resins to acetylene polymers prevented autoxidation of the latter. A mixt. of acetylene polymers stabilized by these addns. is recommended for the production of chemically resistant plastomers and film-forming substances.

M. Hoseh

EWT(m)/EPF(c)/EWP(v)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM
S/0081/65/000/003/S063/S063

ACCESSION NR: AR5008439

SOURCE: Ref. zh. Khimiya, Abs. 3S367

AUTHOR: Konovalov, P.G.; Nikulina, O. S.

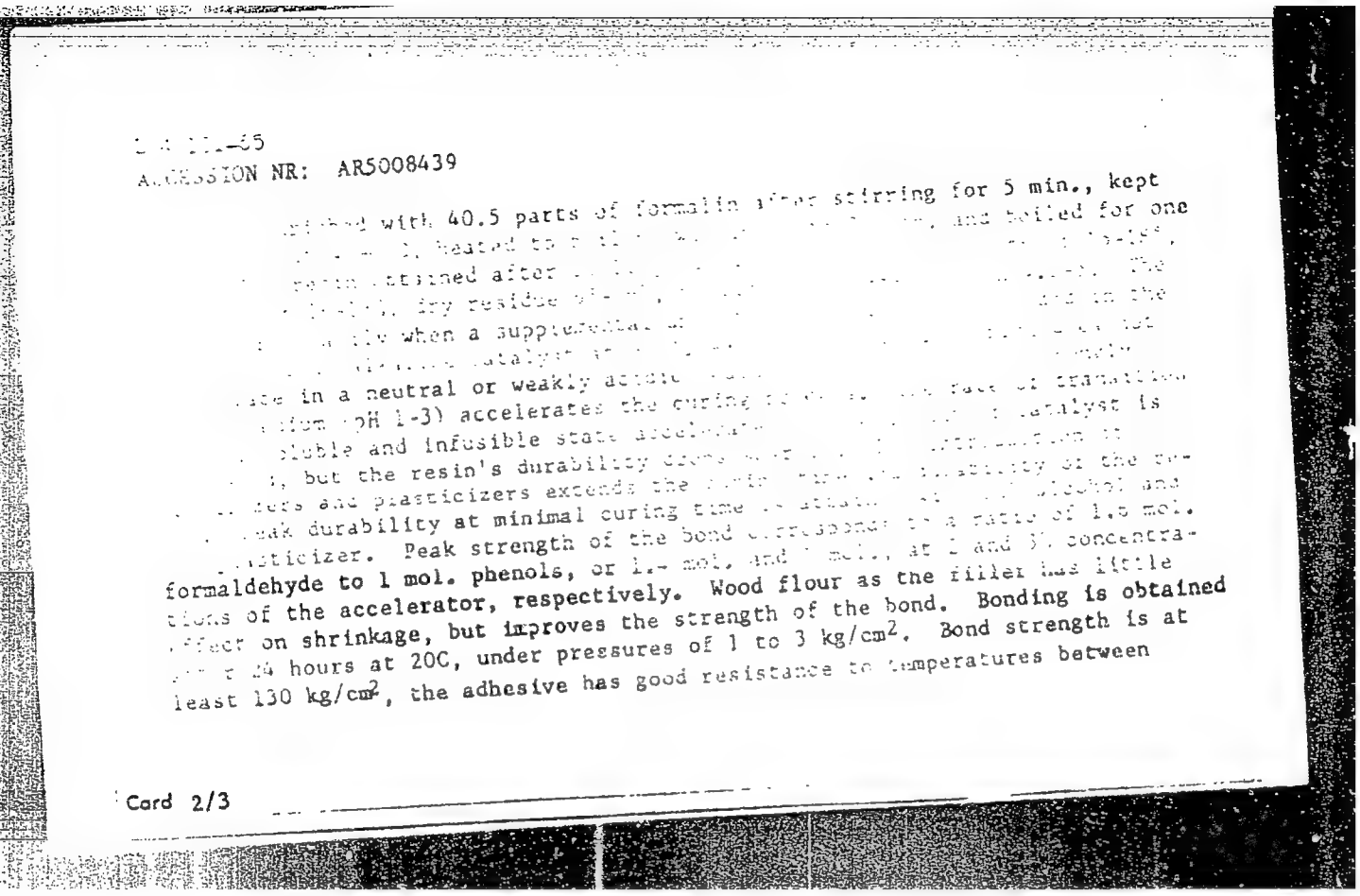
TITLE: Manufacture of an adhesive based on the polycondensation of dimethylresorcinols with formaldehyde

CITED SOURCE: Sb. statey Khim.-tekhnol. fak. Vses. zaochn. politekhn. in-t, vyp. 32, 1964, 78-87

TOPIC TAGS: resin adhesive, PF resin, polycondensation adhesive, adhesive property, polycondensation, dimethylresorcinol copolymer, formaldehyde copolymer

TRANSLATION: The authors studied the polycondensation of a mixture of isomeric dimethylresorcinols with formaldehyde. The products of this reaction are either solid resites or viscous liquids, depending on the proportion of reactants and the environment of the polycondensation. The obtained resins were then plasticized with ethylene glycol. To obtain a resin for adhesive purposes, the reactor flask was charged with 138 parts (by weight) of dimethylresorcinol heated to 45-50C, 41.4 parts of alcohol and 41.4 parts of ethylene glycol. The mixture

Card 1/3



L 4 11-65
ACCESSION NR: AR5008439

...ched with 40.5 parts of formalin after stirring for 5 min., kept ... and boiled for one ... heated to ... resin obtained after ... dry residue ... and to the ... when a supplementary ... catalyst ... made in a neutral or weakly acidic ... from pH 1-3) accelerates the curing ... catalyst is ... soluble and infusible state ... , but the resin's durability ... ders and plasticizers extends the ... durability of the ... weak durability at minimal curing time ... alcohol and ...sticizer. Peak strength of the bond ... a ratio of 1.5 mol. formaldehyde to 1 mol. phenols, or 1.- mol. and ... mol., at 2 and 3% concentrations of the accelerator, respectively. Wood flour as the filler has little effect on shrinkage, but improves the strength of the bond. Bonding is obtained ... t 24 hours at 20C, under pressures of 1 to 3 kg/cm^2. Bond strength is at least 130 kg/cm^2, the adhesive has good resistance to temperatures between

Card 2/3

L 42131-65
ACCESSION NR: AR5008439

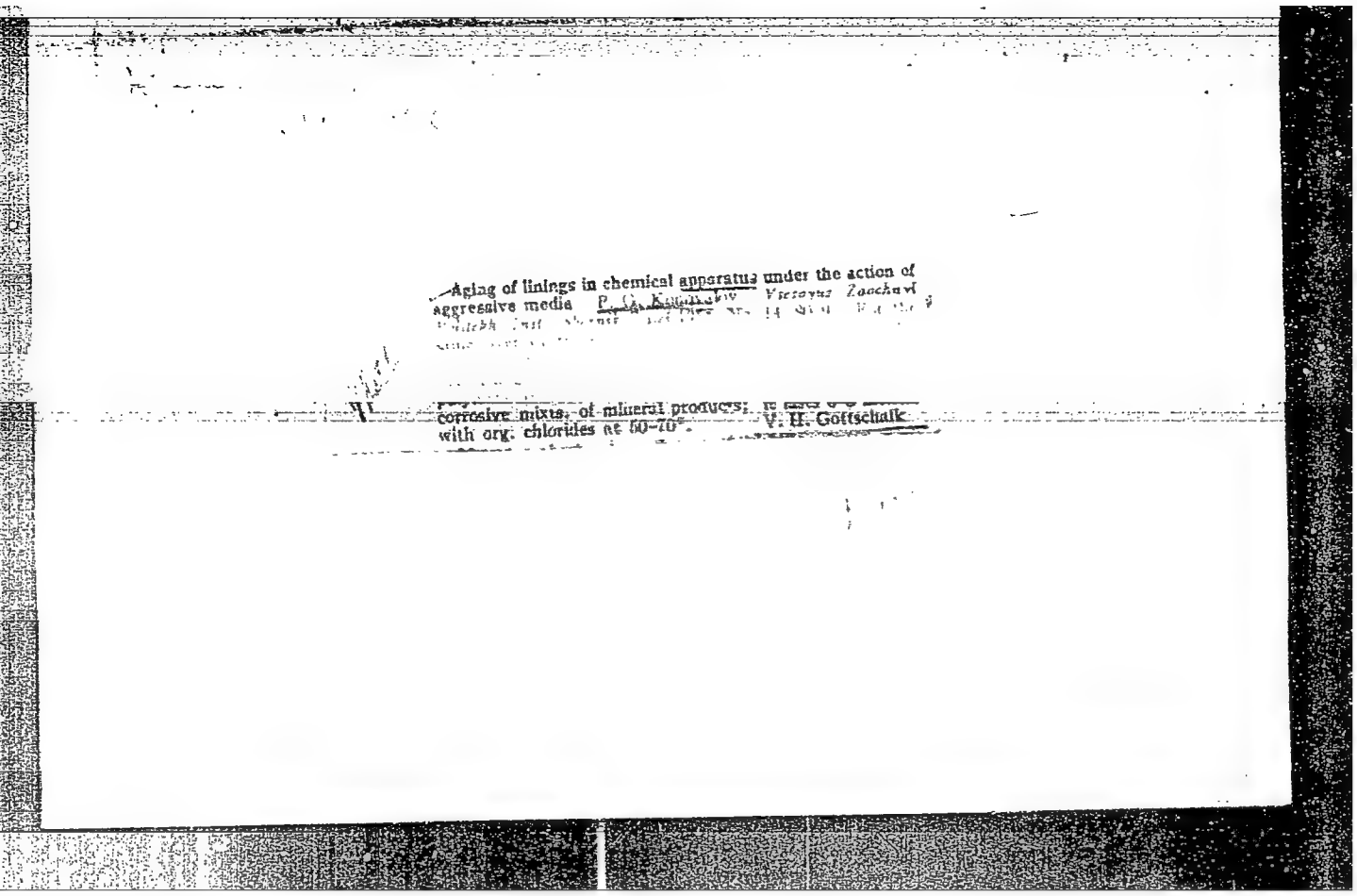
-40 and +50C, surpasses all PF adhesives in bond strength and has comparable moisture resistance. The resin adhesive is stable for 12 months in terms of viscosity and strength of the bond. S Bass.

SUB CODE: MT, OC ENCL: 00

Card 3/3

KONOVALOV, Petr Gordeyevich; ZHEBROVSKIY, Vatslav Vatslavovich; SHNEYDEROVA, Vera Vladimirovna; SOROKIN, M.F., retsenzent; LYALYUSHKO, K.A., retsenzent; YAKUBOVICH, S.V., retsenzent; ROGOVIN, Z.A., retsenzent; SOKOLOVA, N.A., red.

[Laboratory work on the chemistry of film-forming substances and on the technology of coatings and paints] Laboratornyi praktikum po khimii plenkoobrazuiushchikh i po tekhnologii lakov i krasok. IAroslavl', Rosvuzizdat, 1963. 202 p. (MIRA 17:5)



Aging of linings in chemical apparatus under the action of aggressive media P. G. Kuznetsov Viktoryna Zaochaval

corrosive mixts. of mineral products with org. chlorides at 60–70° V. H. Gottschalk

KONOVALOV, P. I.

Technology

Work with light bridging trains; posobie dlia serzhantov inzhenernykh voisk. Moskva, Voen. izd-vo, 1947.

9. Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

KONOVALOV, P.I.

Calculation of resistances in the shunting circuits of motors with series excitation. Nauch. zap. Od. politekh. inst. 12:23-30 '58.
(MIRA 13:11)

(Electric motors)

KONOVALOV, P.M.

Study the effect of salinity on the development of eggs of roach, bream and carp. Mat. k pozn. fauny i flory SSSR, Otd. zool. no.19: 70-82 '50. (MIRA 11:3)

(Aral Sea--Carp) (Salinity)

KONOVALOV, P. M.; KONOVALOVA, Z. A.

Fish Culture

Permissible limits of salt in hatcheries for semianadromous fish. Zool. zhur., 31, No. 1 1952

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

1. KONOVALOV, P. M.

2. USSR (600)

4. Crayfish - Syr-Dar'ya River

7. Crayfish in Syr-Dar'ya river basin, Priroda, 41, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

BEZDENEZHNYKH, G.; KONOVALOV, P.M.; ESLINGER, Yu.V.

Controlled spawning of Aral fish. Vop.ikht. no.1:63-67 '53. (MLRA 7:6)

1. Rybovodno-biologicheskaya laboratoriya Aralrybvoda.
(Fish culture)

1. KONOVALOV, P. M.

2. USSR (600)

4. Sturgeons--Aral Sea

7. Acclimization of the Caspian sturgeon in the Aral Sea, Ryb. khoz., 29, No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

KONOVALOV, P. N.

5762. Opyt po vyrashchivaniyu molodi sevryugi v gruntovykh basseinakh sistemy aralrybovoda. M., Pishchepromizdat, 1954. 20s. s ill. 20sm. (M-Vo Rybnoy prom-sti SSSR. Tekhn upr.obmen peredovym tekhn. opytom). 1.200 ekz. 30k-sost. Ukazany na oborote tit. l.-(55-1036) p 639.3.034

SO: Knizhnaya, Letopis, Vol. 1, 1955

KONOVALOV, P.M.; ESLINGER, Yu.V.

Circular earth basins developed by the Aral Administration for Fish Protection and Culture. Vop.ikht. no.2:97-111 '54. (MLRA 8:5)

1. Aral'skoye upravleniye rybokhrany i rybovodstva - Aralrybvod.
(Fish ponds)

KONOVALOV, P.M.

KONOVALOV,P.M.; KONOVALOVA,Z.A.

Condition of Daphnia as an indicator of changes in the cycle of a body of water. Vop.ikht.no.3:135-139 '55. (MLRA 8:11)

1. Rybovodno-biologicheskaya laboratoriya Aralrybvoda
(Daphnia)

KONOVALOV, P.M.

Daphnia under conditions prevailing in the Aral Sea. Priroda 45 no.5:105-106 My '56. (MLRA 9:8)

1. Rybovodno-biologicheskaya laboratoriya Aral'skogo upravleniya rybookhrany i rybovodstva.
(Aral Sea--Water-fleas)

KONOVALOV, P. M., Cand of Bio Sci -- (diss) "Raising young sturgeon-like fish under conditions of the delta of Syr-Dar'ya river." Frunze, 1957, 22 pp (Academy of Sciences Kirgiz SSR), 150 copies (KL, 35-57, 106)

26-58-7-28/48

AUTHOR: Konovalov, P.M., Candidate of Biological Sciences

TITLE: The Acclimatization of the Caspian Sturgeon in the Aral Sea (Akklimatizatsiya Kaspiyskoy sevryugi v Aral'skom more)

PERIODICAL: Priroda, 1958, Nr 7, pp 106-107 (USSR)

ABSTRACT: Recently, the Aral Sea has become an experimental field for the settlement of new fish species. Thus, eggs of the Caspian sturgeon Acipenser stellatus P. were transferred from the Ufa river delta to the Aral Sea, Mugil auratus R. and Mugil salies R. from the Bekovich Bay on the Caspian Sea, and very large amounts of Clupea harengus membras L. eggs by air from the Baltic Sea. This project is carried out by the Tsentral'naya proizvodstvenno-akklimatizatsionnaya stantsiya Ministerstva rybnoy promyshlennosti SSSR (The Central Industrial Acclimatization Station of the USSR Ministry of the Fish Industry) in cooperation with the local agencies of fish breeding and protection, in order to utilize the food resources, plankton and benthon, contained in the Aral Sea. Relevant investigations were made by a group of assistants of VNIRO under the direction of Ye.A. Yablonskaya. In all acclimatization experiments, the cold winter

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The Acclimatization of the Caspian Sturgeon in the Aral Sea

temperatures of the Aral Sea, where the temperatures of the water falls to 0°C up to a depth of 20 m, must be taken into consideration. The temperature of the deeper water expanses is not yet known, but indications are available that it is more positive. The sturgeon eggs are treated by the method of the hypophysis injection according to N.L. Gerbil'skiy before they are transferred from the Ural Delta to the Aral Sea. The small amounts of Acipenser nudiventris resident in the Aral Sea do not cause much harm to the new species. In 1956, over 702,000 sturgeons of the Acipenser stellatus P. species were transferred to the Aral Sea as compared with 9,000 in 1950. Individual fish have reached a weight of 7 to 8 kg. The meat tastes well, although it is whiter in color than that of the Caspian Sea. Maturity sets in earlier than in the Caspian Sea.

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The Acclimatization of the Caspian Sturgeon in the Aral Sea

ASSOCIATION: Aral'skoye ikhtiologicheskoye otdeleniye AN Kazakhskoy SSR (The Aral Ichthyologic Department of the AS of the Kazakh SSR)

1. Fishes--Aral sea 2. Fish eggs--Transplanting

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Pechi dliter'nogo Goreniya Akkh-9
IAkkh-11 NA Tverdom Toplive

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